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EXAMINER

HANNETT, JAMES M

ART UNIT PAPER NUMBER

2612

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/844,274	Applicant(s) NOGUCHI ET AL.	
	Examiner James M Hannett	Art Unit 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 5-8, 17 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 9-16, 18-25, 27 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/30/01 & 5/24/01</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Species II in the reply filed on 1/13/2005 is acknowledged. The traversal is on the ground(s) that it would not be an undue burden on the Examiner to examine all of the pending claims in the application. This is not found persuasive because the examiner views the differences in the two species to be significant enough to cause an undue burden during a full and comprehensive search of the two species.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1: Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,060,074

Kinugasa et al.

2: As for Claim 9, Kinugasa et al depicts in Figures 20 and 21 and teaches on Column 6, Lines 49-68 and Column 7, Lines 1-67 an optical apparatus (camera) having an image taking lens device (201), comprising: an image pickup device (202) provided at the imaging plane of the image taking lens device (201), for converting an optical image formed by the image taking lens device (201) into electrical signals (204), the image pickup device (202) having a full image area (W) and an output imaging area (W1) narrower than the full imaging area (W); a sensor (207) for sensing a shaking of the optical apparatus (camera) and for producing a shake signal

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corresponding to the shaking; shake correcting means (208) for effecting a correction of an image shaking by shifting, in accordance with the shake signal from the sensor (207), the output imaging area (W1) to be read out from the full imaging area (W) of the image pickup device (202); light quantity correcting means (203) for correcting the light quantity distribution on the image in the output imaging area (W1) read out from the full imaging area (W) of the image pickup device (202); and controlling means for performing control such that the correction of the light quantity distribution by the light quantity correcting means is executed during the correction of the shaking of the image performed by the shake correcting means. Kinugasa et al teaches that the image data output from the image sensor is processed by image processing circuit (203) and the correct output signal is output.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3: Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by USPN

5,913,081 Okano et al.

4: As for Claim 1, Okano et al depicts in Figure 1 and teaches on column 3, Lines 15-67 and Column 4, Lines 1-21 an image stabilizer (4) for an image taking lens device (L3), comprising: image stabilizing means (4) operative for stabilizing, during shaking of the image taking lens (L3) device, the image generated by the image taking lens device (L3); light quantity control (12) disposed in the light path of the image taking lens device (L3); and controlling means (12b) for

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controlling the light quantity control means (12a) so as to vary the aperture size of the light quantity control means (12) during the image stabilization operation performed by the image stabilization means (4).

5: In regards to Claim 2, Okano et al further depicts in Figure 1 and teaches on Column 4, Lines 1-11 the light quantity control means (12) comprises a diaphragm (12a) having a plurality of diaphragm blades driven to vary the aperture size, and wherein the controlling means operates so as to drive said diaphragm blades to reduce the aperture size, during the image stabilizing operation performed by the image stabilizing means (4). Okano et al teaches that the aperture size can be varied in accordance with the required exposure settings. Therefore, the aperture size can be both increased and decreased during a image shake correction procedure.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6: Claims 4, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,913,081 Okano et al in view of USPN 5,060,074 Kinugasa et al.

7: In regards to Claim 4, Okano et al depicts in Figure 1 and teaches on column 3, Lines 15-67 and Column 4, Lines 1-21 an image stabilizer (4) for an image taking device, comprising: image stabilizing means (4) operative for stabilizing, during shaking of the image taking lens (L3) device, the image generated by the image taking lens device (L3); light quantity correcting means (12) for correcting the light distribution of the image formed; and controlling means (12b)

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for causing the light quantity correcting means (12) to effect a correction of the light quantity distribution during the image stabilization operation performed by the image stabilizing means (4). Okano et al teaches a method of preventing shaking of an image in a camera by shifting a lens. Furthermore, Okano et al teaches controlling the amount of light used to form an image by adjusting an aperture size. However, Okano et al does not teach that the image can be captured by an image sensor and converted to an electronic signal.

Kinugasa et al depicts in Figures 20 and 21 and teaches on Column 6, Lines 49-68 and Column 7, Lines 1-67 that it is advantageous to capture images using an image sensor (202) disposed at an imaging plane of an image taking lens (201) device and having an imaging area (W) which converts an optical image formed by the image taking lens (201) device into electrical signals, the image pickup device (202) delivering as picture signals the electrical signals derived from the imaging area (W).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the camera of Kinugasa et al in the camera (2) and lens (1) system of Okano et al in order to allow images to be captured electronically.

8: In regards to Claim 10, Okano et al depicts in Figure 1 and teaches on column 3, Lines 15-67 and Column 4, Lines 1-21 an optical apparatus (camera) having an image taking lens device (1), comprising; a diaphragm (12) provided in the light path of the image taking lens (1) device; and controlling means (12b) for performing control so as to vary the aperture size of the diaphragm (12) during the correction of the shaking of the image performed by the shake correction means (4), the controlling means performs control such that the aperture size of the diaphragm (12) is smaller when the image shake correcting operation is being performed by the

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shake correction means than when the image shake correcting operation is not being performed.

Okano et al teaches that the aperture size can be varied in accordance with the required exposure settings. Therefore, the aperture size can be both increased and decreased during an image shake correction procedure. However, Okano et al only teaches that shake correction can be performed using a lens shifting technique and is silent as to using an electronic shifting technique.

Furthermore, Okano et al does not teach the use of capturing the images with an image sensor.

Kinugasa et al depicts in Figures 20 and 21 and teaches on Column 6, Lines 49-68 and Column 7, Lines 1-67 an optical apparatus (camera) having an image taking lens device (201), comprising: an image pickup device (202) provided at the imaging plane of the image taking lens device (201), for converting an optical image formed by the image taking lens device (201) into electrical signals (204), the image pickup device (202) having a full image area (W) and an output imaging area (W1) narrower than the full imaging area (W); a sensor (207) for sensing a shaking of the optical apparatus (camera) and for producing a shake signal corresponding to the shaking; shake correcting means (208) for effecting a correction of an image shaking by shifting, in accordance with the shake signal from the sensor (207), the output imaging area (W1) to be read out from the full imaging area (W) of the image pickup device (202); light quantity correcting means (203) for correcting the light quantity distribution on the image in the output imaging area (W1) read out from the full imaging area (W) of the image pickup device (202); and controlling means for performing control such that the correction of the light quantity distribution by the light quantity correcting means is executed during the correction of the shaking of the image performed by the shake correcting means. Kinugasa et al teaches that the

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image data output from the image sensor is processed by image processing circuit (203) and the correct output signal is output.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the camera of Kinugasa et al in the camera (2) and lens (1) system of Okano et al in order to allow images to be captured electronically and to improve the image shake correction by allowing the captured images to also be corrected by shifting the pixels.

9: As for Claim 11, Okano et al depicts in Figure 1 and teaches on column 3, Lines 15-67 and Column 4, Lines 1-21 an optical apparatus (camera) having an image taking lens device (1), comprising; a diaphragm (12) provided in the light path of the image taking lens (1) device; and controlling means (12b) for performing control so as to vary the aperture size of the diaphragm (12) during the correction of the shaking of the image performed by the shake correction means (4), the controlling means performs control such that the aperture size of the diaphragm (12) is smaller when the image shake correcting operation is being performed by the shake correction means than when the image shake correcting operation is not being performed. Okano et al teaches that the aperture size can be varied in accordance with the required exposure settings. Therefore, the aperture size can be both increased and decreased during an image shake correction procedure. The gain controller is viewed by the examiner as the aperture control which controls the amount of light allowed to reach the imaging surface. However, Okano et al only teaches that shake correction can be performed using a lens shifting technique and is silent as to using an electronic shifting technique. Furthermore, Okano et al does not teach the use of capturing the images with an image sensor.

Kinugasa et al depicts in Figures 20 and 21 and teaches on Column 6, Lines 49-68 and Column 7, Lines 1-67 an optical apparatus (camera) having an image taking lens device (201), comprising: an image pickup device (202) provided at the imaging plane of the image taking lens device (201), for converting an optical image formed by the image taking lens device (201) into electrical signals (204), the image pickup device (202) having a full image area (W) and an output imaging area (W1) narrower than the full imaging area (W); a sensor (207) for sensing a shaking of the optical apparatus (camera) and for producing a shake signal corresponding to the shaking; shake correcting means (208) for effecting a correction of an image shaking by shifting, in accordance with the shake signal from the sensor (207), the output imaging area (W1) to be read out from the full imaging area (W) of the image pickup device (202); light quantity correcting means (203) for correcting the light quantity distribution on the image in the output imaging area (W1) read out from the full imaging area (W) of the image pickup device (202); and controlling means for performing control such that the correction of the light quantity distribution by the light quantity correcting means is executed during the correction of the shaking of the image performed by the shake correcting means. Kinugasa et al teaches that the image data output from the image sensor is processed by image processing circuit (203) and the correct output signal is output.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the camera of Kinugasa et al in the camera (2) and lens (1) system of Okano et al in order to allow images to be captured electronically and to improve the image shake correction by allowing the captured images to also be corrected by shifting the pixels.

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10: Claims 12, 13, 18, 19, 21, 22, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,913,081 Okano et al in view of USPN 5,311,238 Karasawa et al.

11: In regards to Claim 12, Okano et al depicts in Figure 1 and teaches on column 3, Lines 15-67 and Column 4, Lines 1-21 an image stabilizer (4) for a variable magnification lens (1) Column 7, Lines 18-26, comprising: means for stabilizing (4) an image produced by the variable magnification lens (1) during shaking of the variable magnification lens (1); a first diaphragm (12) disposed in an optical path of said variable magnification lens (1); and control means (2b) for controlling said first diaphragm (12). However, Okano et al does not teach the method of controlling the zoom lens by varying a full-open aperture diameter of said first diaphragm (12) according to a focal length of said variable magnification lens during stabilizing of the image by said stabilizing means (4).

Karasawa et al depicts in Figure 2 and 3 and teaches on Column 7, Lines 18-60 that it is advantageous when designing a camera system that utilizes both a zoom lens and a diaphragm, to change the full-aperture diameter of a diaphragm according to a focal length, in order to meet ISO requirements and to improve image quality over the viewable range.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust the diaphragm aperture size of the diaphragm in the camera of Okano et al in accordance with a focal length as taught by Karasawa et al, in order to meet ISO requirements and to improve image quality over the viewable range.

12: As for Claim 13, Karasawa et al further depicts in Figure 2 and 3 and teaches on Column 7, Lines 18-60 the control means provides a control to make the full-open aperture diameter of said diaphragm smaller when said variable magnification lens is on a telephoto side.

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13: In regards to Claim 18, Karasawa et al depicts in Figure 2 and 3 and teaches on Column 7, Lines 18-60 that it is advantageous when designing a camera system that utilizes both a zoom lens and a diaphragm, to change the full-aperture diameter of a diaphragm according to a focal length, in order to meet ISO requirements and to improve image quality over the viewable range. Therefore, it is inherent that the focal length position is known in order to set the aperture size accordingly.

14: As for Claim 19, Okano et al teaches on Column 7, Lines 18-26 that the lens system can be a zoom lens.

15: As for Claim 21, Claim 21 is rejected for reasons discussed related to Claim 12, Since Claim 12 is substantively equivalent to Claim 21.

16: In regards to Claim 22, Claim 22 is rejected for reasons discussed related to Claim 13, Since Claim 13 is substantively equivalent to Claim 22.

17: As for Claim 27, Claim 27 is rejected for reasons discussed related to Claim 18, Since Claim 18 is substantively equivalent to Claim 27.

18: In regards to Claim 28, Claim 28 is rejected for reasons discussed related to Claim 19, Since Claim 19 is substantively equivalent to Claim 28.

19: Claims 14, 15, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,913,081 Okano et al in view of USPN 5,311,238 Karasawa et al in further view of USPN 5,513,042 Itoh et al.

20: In regards to Claim 14, Okano et al in view of Karasawa et al teaches the use of a camera that can shift a lens to perform image shake correction. Furthermore, Okano et al in view of Karasawa et al teaches the use of adjusting a aperture (F-number) of a diaphragm in accordance

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with a focal and zoom position of a lens in order to meet ISO requirements and to improve image quality. Therefore, the diaphragm taught by Okano et al in view of Karasawa et al is an F-number diaphragm that determines an F-number. However, Okano et al in view of Karasawa et al does not teach that the camera system can have both a first and second diaphragm and that the second diaphragm can determine an F-number.

Itoh et al depicts in Figure 1b and teaches on Column 9, Lines 25-38 that it is advantageous when designing a lens system for a camera, to provide the lens system with two diaphragms (S and S2) to allow the camera to better control the amount of light hitting the image surface. And to reduce the diameter of the conversion lens system. Therefore, decreasing the complexity of the diaphragm control mechanism.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the single diaphragm and diaphragm control system of Okano et al in view of Karasawa et al with the multiple diaphragm and diaphragm control system of Itoh et al in order to allow the camera to better control the amount of light hitting the image surface. And to reduce the diameter of the conversion lens system.

21: As for Claim 15, Itoh et al further depicts in Figure 1b that the first diaphragm and second diaphragm (S1 and S) are disposed adjacent to each other.

22: As for Claim 23, Claim 23 is rejected for reasons discussed related to Claim 14, Since Claim 14 is substantively equivalent to Claim 23.

23: In regards to Claim 24, Claim 24 is rejected for reasons discussed related to Claim 15, Since Claim 15 is substantively equivalent to Claim 24.

24: Claims 16 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,913,081 Okano et al in view of USPN 5,311,238 Karasawa et al in view of USPN 5,513,042 Itoh et al in further view of USPN 3,918,798 Takano.

25: In regards to Claim 16, Okano et al in view of Karasawa et al in view of in view of Itoh et al teaches the use of a system that can perform image shake correction by shifting a lens. Furthermore, Okano et al in view of Karasawa et al in view of in view of Itoh et al teaches the use of a two diaphragm light control system which adjust the diaphragm aperture size in accordance with the focal length and zoom position. However, Okano et al in view of Karasawa et al in view of in view of Itoh et al does not teach the method wherein said first diaphragm is controlled by said control means in such a way as to limit an on-axial light flux when said variable magnification lens is on a telephoto side.

Takano teaches in the abstract and on Column 3, Lines 40-67 and depicts in Figures (1 and 2) that it is advantageous when designing a lens system with two diaphragms to control a first diaphragm means in such a way as to limit an on-axial light flux when said variable magnification lens is on a telephoto side. Therefore, decreasing vignetting and therefore, increasing image quality.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the two diaphragms in the camera system of Okano et al in view of Karasawa et al in view of in view of Itoh et al in such a way as to limit an on-axial light flux when said variable magnification lens is on a telephoto side as taught by Takano in order to decrease vignetting and therefore, increasing image quality.

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26: As for Claim 25, Claim 25 is rejected for reasons discussed related to Claim 16, Since Claim 16 is substantively equivalent to Claim 25.

27: Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,913,081 Okano et al in view of USPN 3,955,208 Wick et al.

28: As for Claim 3, Kinugasa et al the light quantity control means in the form of a mechanical diaphragm (12). Kinugasa et al teaches that the diaphragm is controlled so as to reduce the aperture size, during the image stabilizing operation (4) performed by the image stabilizing means (4). However, Kinugasa et al does not teach that the diaphragm can be a liquid crystal device having annular regions coaxial with the optical axis of the image taking lens device.

Wick et al depicts in Figure (4a) and teaches on Column 4, Lines 9-55 that it is advantageous when designing a camera with a diaphragm, to replace a mechanical diaphragm with a liquid crystal diaphragm having annular regions coaxial with the optical axis. Wick et al teaches that a liquid crystal diaphragm is superior to a mechanical diaphragm because there are no moving parts. Therefore, the complexity of the camera can be simplified.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the mechanical diaphragm in Kinugasa et al with the liquid crystal diaphragm of Wick et al in order to decrease the complexity of the camera by eliminating the complicated mechanical diaphragm.

29: Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,913,081 Okano et al in view of USPN 5,311,238 Karasawa et al in further view of USPN 5,060,074 Kinugasa et al.

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30: In regards to Claim 20, Okano et al in view of Karasawa et al teaches the use of a camera system that can capture an image and correct for camera shake by moving a lens within a lens barrel. However, Okano et al in view of Karasawa et al does not teach the use of capturing the image using a CCD image sensor and further correcting image shake by electronically shifting pixels.

Kinugasa et al depicts in Figures 20 and 21 and teaches on Column 6, Lines 49-68 and Column 7, Lines 1-67 an optical apparatus (camera) having an image taking lens device (201), comprising: an image pickup device (202) provided at the imaging plane of the image taking lens device (201), for converting an optical image formed by the image taking lens device (201) into electrical signals (204), the image pickup device (202) having a full image area (W) and an output imaging area (W1) narrower than the full imaging area (W); a sensor (207) for sensing a shaking of the optical apparatus (camera) and for producing a shake signal corresponding to the shaking; shake correcting means (208) for effecting a correction of an image shaking by shifting, in accordance with the shake signal from the sensor (207), the output imaging area (W1) to be read out from the full imaging area (W) of the image pickup device (202); light quantity correcting means (203) for correcting the light quantity distribution on the image in the output imaging area (W1) read out from the full imaging area (W) of the image pickup device (202); and controlling means for performing control such that the correction of the light quantity distribution by the light quantity correcting means is executed during the correction of the shaking of the image performed by the shake correcting means. Kinugasa et al teaches that the image data output from the image sensor is processed by image processing circuit (203) and the correct output signal is output.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the camera of Kinugasa et al in the camera (2) and lens (1) system of Okano et al in view of Karasawa et al in order to allow images to be captured electronically and to improve the image shake correction by allowing the captured images to also be corrected by shifting the pixels.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USPN 5,396,286 Ishizuka teaches the use of a digital camera with a diaphragm and electronic shake correction; USPN 5,809,353 Hirano teaches the use of a camera that shifts a lens in order to achieve shake correction; USPN 5,894,325 Yonemoto teaches the use of a digital camera that performs shake correction by shifting the pixels in an image sensor; USPN 4,599,657 Kinoshita et al teaches the use of a digital camera that uses a diaphragm; USPN 5,604,560 Kaneda teaches the use of a camera with a diaphragm and a zoom lens.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M Hannett whose telephone number is 703-305-7880. The examiner can normally be reached on 8:00 am to 5:00 pm M-F.

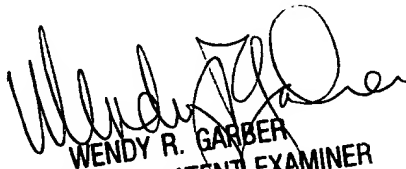
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James M. Hannett
Examiner
Art Unit 2612

JMH
June 24, 2005


WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600